



City of Saint Paul, Minnesota

Emerald Ash Borer Management Program 2020 Annual Report -- 2021 Recommendations

The City of Saint Paul's (the City) EAB Management Program began in 2010, making 2020 year eleven of EAB management in the city. However, as it has been estimated to have arrived as early as 2004, next year will mark the seventeenth year of EAB's existence in our city. Recognizing this complete timeframe is fundamental in understanding the progression of the EAB infestation and projecting future management needs.

Officials who have dealt with EAB infestations elsewhere have warned that it is a fast-paced event, lasting perhaps 10-20 years, before 100% tree mortality is reached. While the spread of EAB in Saint Paul has lagged behind projected curves in terms of ash tree mortality rates, it still means the loss of all ash trees not treated with insecticides, including approximately 27,000 (ca 2009) on city streets, and thousands more on both public parkland/open space and private property. It requires that the City, residents included, be prepared to handle a glut of dying trees in a short timeframe or suffer the consequences of thousands of dead and potentially hazardous trees in the landscape.

This document summarizes management events of 2020 along with recommendations for EAB management in 2021.



Inventory

A basic knowledge of current conditions of the urban forest, i.e. an up-to-date inventory, is required to direct management needs and goals in terms of the EAB infestation. This information is of increasing importance as the City will likely face liability issues with the remaining ash tree resource (approximately 11,000 remaining on boulevards and parkways).

The City of Saint Paul receives dozens of claims for damage caused by publicly owned trees every year, many of which are for ash trees that lose branches or completely fail (ash species quickly become brittle and are prone to failure upon decline and death). As ash mortality increases due to EAB infestation such claims are likely to increase unless trees are promptly removed, which will only be increasingly less likely as the number of trees in need of removal is expected to rise dramatically. Thus, it is imperative that comprehensive tree inventory records are kept not only to coordinate ash tree management, but also to document calls and work history for use when reviewing risk management claims.

2021 Recommendations—Inventory:

- **Continue real-time updating of boulevard and park trees as work is performed**
- **Continue to add parkland trees to inventory as capacity allows, especially active use areas**
- **Utilize seasonal staff to assist with updating inventory**

Monitoring/Inspection

Routine monitoring and inspections have played a vital role in extending the timeframe for EAB management. Coupled with sanitation, it is likely that these efforts significantly influenced the delay in tree mortality in Saint Paul. Monitoring efforts in 2020 confirmed that the EAB infestation has now spread to 100% of the city and is outpacing the removal of known infested trees.

It is important to note that without additional increases in EAB management staff since 2010, providing inspections of privately owned ash trees became impossible as EAB progressed across the city. In lieu of providing requested inspections for property owners, beginning in 2019 City staff began performing an annual city-wide inspection of all right-of-way ash trees during the growing season, noting canopy condition, dead standing trees, and overall tree health using a simple rating system. This monitoring data is then used to determine the following year's Structured Removal plans.

As with publicly owned ash trees, private property trees will continue to become infested with EAB, and those trees will die if property owners do not proactively deal with them either by having them removed or by treating them with an insecticide. It is a forgone conclusion that the City will be increasingly enforcing its ordinance regarding dangerous trees moving forward as ash trees become increasingly infested and pose potential hazards to adjacent properties, both public and private. Meanwhile, the City has continued to be proactive in educating citizens on the issues of EAB through its outreach efforts (see Outreach section).

2021 Recommendations—Monitoring/Inspection:

- **Continue annual city-wide inspection of public property ash trees to guide EAB management.**
- **Use information to assess increasing mortality of ash trees due to EAB and help drive crisis management as it evolves.**
- **Include transition to reactive management of dying ash trees on private property, due to EAB, that would meet the conditions of the City's ordinance for Dangerous Trees.**

Removals

Structured Removal

Structured Removal (SR) is the systematic removal of entire blocks of ash trees throughout the city. It was designed as an economically advantageous program—the necessity of revisiting the same street repeatedly over consecutive years to remove individual ash trees is eliminated; tree and stump removal is faster and therefore less costly; tree replacement is more efficient, an important factor when considering that while planting costs are on the rise the City still benefits by saving on internal staff time. With the acceleration of EAB, Structured Removal will be utilized at a higher rate than in previous years in order to reduce the backlog of infested trees now in the system—over 2,600 ash trees were identified in 2020 to be removed in 2021 through Structured Removal efforts.

Since infestation levels have outpaced the City's ability to keep up with infested tree removals for several years, a schedule for 2021 and beyond has been created where stump grinding and replanting are delayed, favoring prioritizing the removal of potentially hazardous infested trees.



Construction-related Removals

In 2010, the Parks and Recreation and Public Works Departments began working together to create efficiencies in street construction projects where ash trees existed. Over the past ten years, nearly 1,900 ROW ash trees have been removed prior to street reconstruction, later replaced with a more diverse selection of trees. This program has worked well over the years as major street construction has detrimental impacts to the health of mature trees, and while tree loss can dramatically change the streetscape, it has become an accepted practice in Saint Paul to proactively remove and replace these trees during the construction process.

Individual Removals

As SR efforts clear large blocks of ash, the City will continue to monitor and remove individual ash as needed. Those ash that are only among a small number on any given block, or those that are the only ash on their block, will not be included in the SR efforts, but rather will be monitored and removed if necessary on a case by case basis.

Removals Near Overhead Utilities

Working in conjunction with Xcel Energy, the City has prioritized the removal of all ash in potential conflict with power lines. In 2020, the City and Xcel worked together to remove roughly 150 ash adjacent to power lines, and it is estimated another 175 will be removed in 2021.

Park Removals

In 2017, a rating system was created to help guide management in City-owned parklands to complete the removal of ash trees systematically. The rating includes factors such as park usage, severity of infestation/condition, and racial equity. Trees growing in managed open-space are prioritized over those in unmanaged wooded areas, however ash growing in wood-lines that could potentially impact managed areas, paths, or roadways have been and will continue to be addressed.

Continued concern for ash in difficult-to-access natural areas such as the river corridor culminated in 2017 in an effort led by the National Park Service affiliate, Friends of the Mississippi River (FMR), to brainstorm how to deal with this regional problem. Thus far, there is no major plan in addressing the impending loss of ash trees in these natural areas other than to support increased efforts of our own Environmental Services unit and groups like FMR to lead small volunteer restoration and planting efforts, and seeking out grant funding to supplement these efforts. Saint Paul Forestry's 2021 plans include the removal of declining ash trees within the Mississippi River corridor which could potentially impact users of the park and trail areas.



Since 2011, the Minnesota Department of Agriculture (MDA) has been utilizing biological controls in the form of parasitic wasps to help combat EAB. The tiny, non-stinging wasps have been released along the river corridor and in other natural areas with the hope that they will help to stabilize the EAB population so that it does not reach the expected explosive growth it is capable of. More information on that program can be found at <http://www.mda.state.mn.us/plants/pestmanagement/eab/eabbiocontrol.aspx>.

2020 ash removal numbers include:

- 3,565 total ash trees removed from city ROW's and Parks (*YTD Total = 18,614*)
 - 3,310 ROW ash trees (*YTD total ROW ash removed = 16,109*)
 - 2,661 Structured Removal (*infested*)
 - 43 Construction related
 - 253 MnDOT trunk highway removals
 - 349 individual infested and other
 - 255 Park ash trees (*YTD total Park ash removed= 2,505*)

2021 Recommendations—Removals:

- **Within budget capacity, remove publicly owned EAB infested ash trees along streets utilizing SR whenever possible.**
- **Continue ash removals within the scope of opportunity-based programs such as street reconstruction and Xcel Energy project areas.**
- **On parkland, within budget capacity, remove all ash trees in parks identified as being infested, utilizing an approach similar to SR.**
- **Continue to employ creative management options for infested trees in the river corridor, e.g., use of grants, partner organizations, and volunteers.**
- **Continue to make the case that funding needs to be increased to keep pace with EAB infestation.**

Insecticide Treatment

The City's goal for insecticide treatments of public trees is to reduce EAB populations in order to extend the timeframe to complete ash removals and replanting on public property. Thus, the treatment program will be phased out and those ash trees selected for treatment by the City will be removed as part of ongoing Structured Removal efforts.

Forestry continues to use various insecticides with active ingredient emamectin benzoate—a non-neonicotinoid, administered through trunk injection (versus a soil drench or other methods). Injecting the chemical directly into the tree is meant to reduce exposure of the pesticide to other non-target organisms. Treated trees have an aluminum tag attached to them with the most recent year of treatment, e.g., "ST PAUL, EAB, 2020". Insecticide treatments must be repeated at a regular interval of every 2 to 3 years to ensure survivability from EAB.

One advantage of the treatment program is the benefits derived, both environmental and social, by retaining some large canopy shade trees while reforestation efforts take hold. Although concerns exist over the use of pesticides, arguably an equal environmental impact exists in the potential loss of benefits provided by these trees.

2020 ash treatment numbers include:

- 1,078 total ash trees treated under contract with private tree care company:
 - 995 ROW ash trees (*overall total of ROW trees now in treatment = 2,598*)
 - 83 Park ash trees (*overall total of Parks trees now in treatment = 286*)
- 168 ROW ash treated by adjacent property owner through permit process

2021 Recommendations—Insecticide Treatment:

- **Treat 853 ROW and 106 Park trees using emamectin benzoate.**
- **Continue issuance of free permits to residents who would like to treat their boulevard ash tree at their own expense.**
 - **Permits will be reviewed on a case by case basis and approval requires the tree to meet certain size and condition criteria.**

Reforestation

Reforesting the city with a diverse palette of young trees is the primary objective in preserving the vibrancy of our urban forest while reducing the chance of future widespread tree loss events. While it is impossible to avoid the introduction of new pests and diseases, refraining from monoculture planting schemes can help to reduce their potential devastating impacts.

Since the EAB Management Program began, the goal for reforestation has been to replace every ash tree removed at a 1:1 ratio. However, in 2020, due to the prioritization of infested tree removal over stump grinding and planting, only 99 ash replacement trees were planted on Structured Removal streets. The planting was made possible by funds secured through the Minnesota DNR's Environment and Natural Resources Trust Fund grant program. Planting of ash replacement trees in construction areas and through the citywide tree planting program took place in both the spring and fall of 2020. Parks also received 108 new trees in 2020, harvested from the City's gravel bed nursery and planted in the fall. Continued partnerships with groups such as Mississippi Park Connection and Tree Trust have helped to increase these plantings in parks. Notably, in 2020, the City worked collaboratively with Tree Trust and The Nature Conservancy to replace ash trees at Duluth-Case Recreation Center and on the southern end of Johnson Parkway. These numbers do not include the thousands of smaller trees (*mostly seedlings or saplings*) planted in park natural areas through the Environmental Services unit of the Natural Resources Section.



2021 Recommendations—Reforestation:

- **Continue to use mixed planting schemes and a diverse palette of tree species.**
- **Continue natural resource related planting projects in parks to off-set the loss of ash trees, seeking grants and other funding opportunities.**
- **Increase planting in parks with less expensive containerized and bare root gravel bed trees as a replacement for ash removed from system.**

Outreach

Emerald ash borer information is primarily disseminated to residents via the internet:

- www.stpaul.gov/forestry (main Forestry web page with links to EAB)
- www.stpaul.gov/EAB (bypasses the main Forestry web page and takes you directly to EAB)

The City utilizes the following to inform the public on EAB:

- EAB website (www.stpaul.gov/eab)
 - [EAB FAQ sheet](#)
 - Interactive Boulevard Ash Tree Management Map
 - “Emerald Ash Borer Management in Saint Paul” video
 - Compilation of links to additional resources
- Direct mail postcards (photo to right)
- Community newspapers
- Social media
 - Facebook: [Saint Paul Natural Resources](#)
 - Instagram: [@SaintPaulNaturalResources](#)
- Tree Advisory Panel (TAP)
- City Council & District Council offices
- Door Hangers
- Staff attendance at various public meetings, workshops, and events



The [Homeowner's Guide to Emerald Ash Borer](#) is a resource the City has created and maintains regularly with up-to-date information on how to identify ash trees and management strategies available. Unfortunately, there are very few options—treatment or removal/replacement, and as trees become more infested the treatment option becomes less viable. Unmanaged ash trees left in the landscape will succumb to EAB and will potentially pose a safety risk to individual properties, adjacent properties, or the public. Therefore, the “do nothing” or “wait and see” approach is not recommended.

Expansion of existing Tree Steward outreach efforts aimed at engagement of communities in planting and maintaining trees is another goal as we move forward. Having more residents that are knowledgeable and actively assisting the City with public spaces or helping neighbors plant on private property will ensure the health and longevity of a younger urban forest.

2021 Recommendations - Outreach:

- **Upon request, attend community meetings to present information on EAB.**
- **Expand Tree Steward programs to include planting and maintaining young city trees.**
- **Expand efforts to assist residents with information in dealing with private property ash trees, including guidance on pesticide use, or removal and replacement tree planting.**